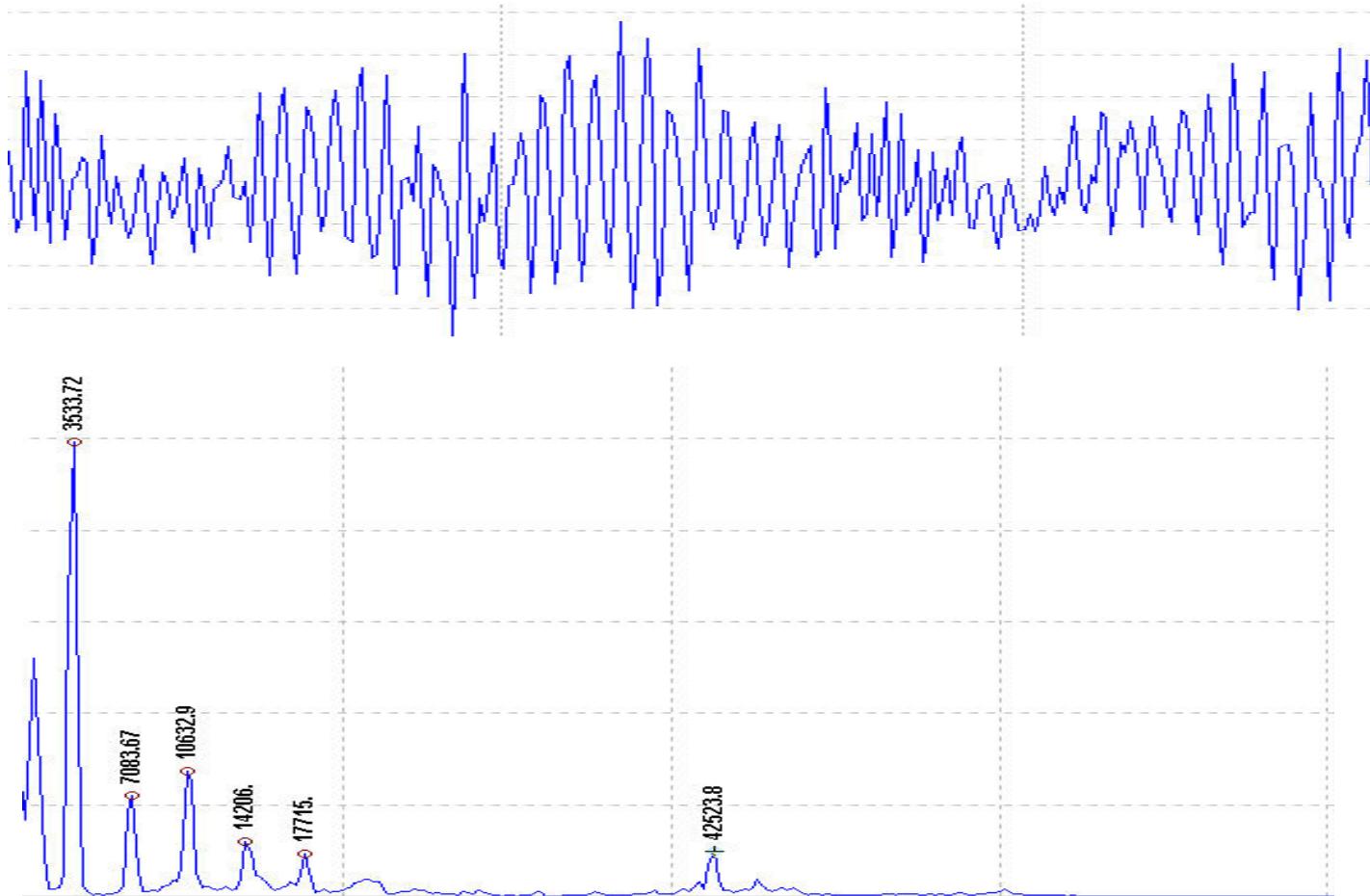


Diagnosing Misalignment

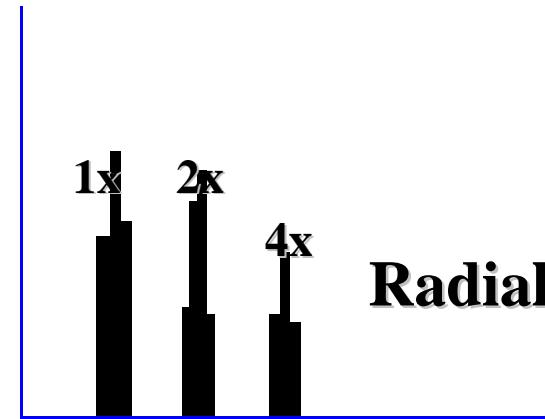
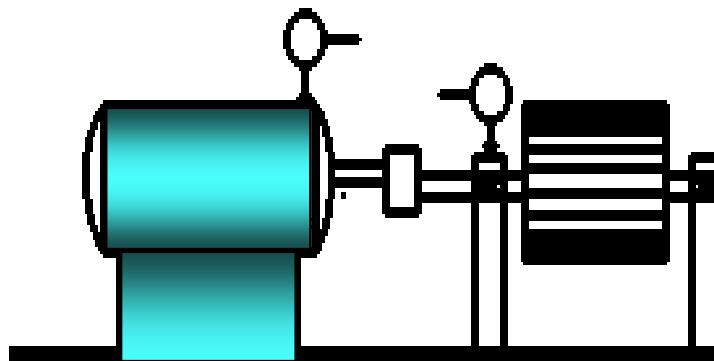
1. Vibration Analysis.

2. Thermography.

Vibration Analysis.

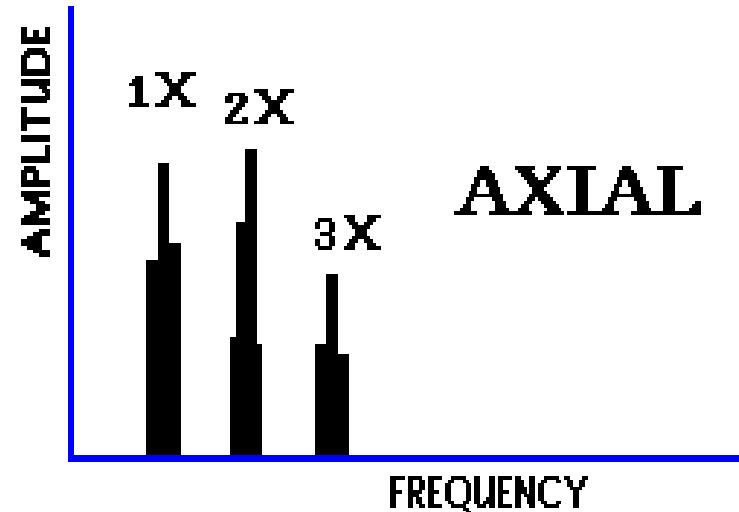
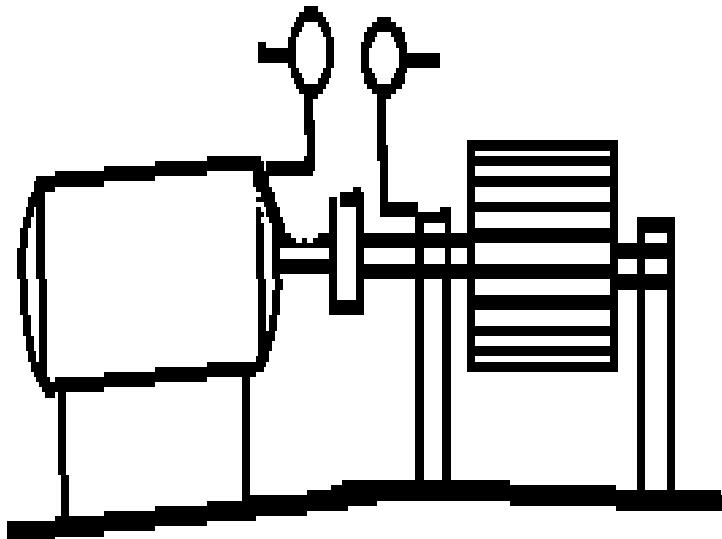


PARALLEL MISALIGNMENT



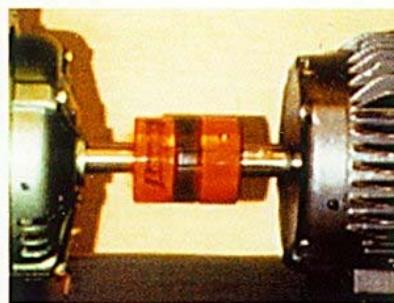
- High radial vibration 180° out of phase
- Severe conditions give higher harmonics
- 2X RPM often larger than 1X RPM
- Similar symptoms to angular misalignment
- Coupling design can influence spectrum shape and amplitude

ANGULAR MISALIGNMENT

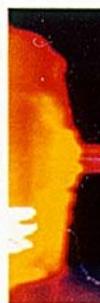


- Characterized by high axial vibration
- 180° phase change across the coupling
- Typically high 1 and 2 times axial vibration
- Not unusual for 1, 2 or 3X RPM to dominate
- Symptoms could indicate coupling problems

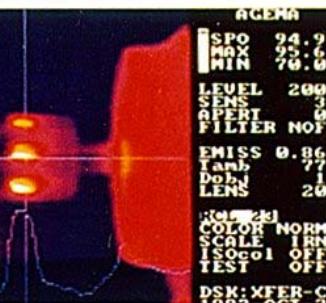
Thermography



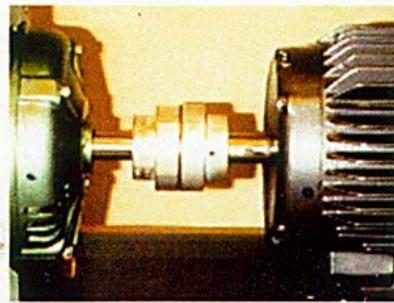
Lovejoy



Aligned



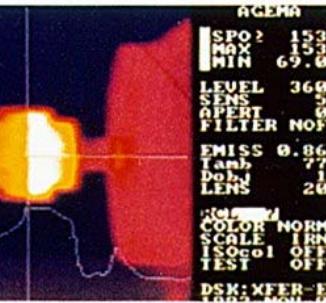
Misaligned



Magnaloy



Aligned



Misaligned